

What is claimed is:

CLAIMS

1. A method, comprising:  
5 retrieving selected data from one or more mass storage devices, based at least in part on historical device access information of at least one requester of data.
2. The method of claim 1, further comprising:  
storing said selected data into cache memory.
3. The method of claim 1, wherein:  
10 said historical device access information comprises, at least in part, device identification information of one or more said mass storage devices.
4. The method of claim 1, wherein:  
said historical device access information comprises at least in part, historical large block address (LBA) data generated by one or more data requests from said requester of  
15 data.
5. The method of claim 2, further comprising:  
receiving one or more requests for data, and determining if said one or more requests for data matches said selected data stored in cache memory.
6. The method of claim 1, further comprising:  
20 creating a requester profile by associating said requester of data with said historical device access information.
7. The method of claim 6, further comprising:  
updating said profile with additional device access information.
8. The method of claim 1, wherein:

said requester of data comprises information selected from a media access control (MAC) address, processor identification and user information.

9. The method of claim 2, further comprising:

retrieving device data layout information from one or more said mass storage

5 devices and storing said device data layout information in said cache memory.

10. The method of claim 9, further comprising:

responding to a request for data by determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

10 11. The method of claim 9, wherein:

said device data layout comprises a file system type selected from a file allocation (FAT) file system and a new technology file system (NTFS) type.

12. An apparatus, comprising:

an integrated circuit that is capable of retrieving selected data from one or more  
15 mass storage devices, based at least in part on historical device access information of at least one requester of data.

13. The apparatus of claim 12, wherein:

said integrated circuit is further capable of storing said selected data into cache memory.

20 14. The apparatus of claim 12, wherein:

said historical device access information comprises at least in part, historical large block address (LBA) data generated by one or more data requests from said requester of data.

15. The apparatus of claim 13, wherein:

said integrated circuit is further capable of receiving one or more requests for data; said integrated circuit is also capable of determining if said one or more requests for data matches said selected data stored in cache memory.

5 16. The apparatus of claim 12, wherein:

said integrated circuit is further capable of creating a requester profile by associating said requester of data with said historical device access information.

17. The apparatus of claim 16, wherein:

said integrated circuit is further capable of updating said requester profile with  
10 additional device access information from one or more said requesters of data.

18. The apparatus of claim 12, wherein:

said requester of data comprises information selected from a media access control (MAC) address, processor identification and user information.

19. The apparatus of claim 13, wherein:

15 said integrated circuit is further capable of retrieving device data layout information from one or more said mass storage devices and storing said device data layout information in said cache memory.

20. The apparatus of claim 19, wherein:

said integrated circuit is further capable of responding to a request for data by  
20 determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

21. The apparatus of claim 19, wherein:

said device data layout comprises a file system type selected from a file allocation (FAT) file system and a new technology file system (NTFS) type.

22. An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

retrieving, by an integrated circuit, selected data from one or more mass storage devices, based at least in part on historical device access information of at least one requester of data.

23. The article of claim 22, wherein:

said integrated circuit is capable of storing said selected data into cache memory.

24. The article of claim 22, wherein:

said integrated circuit is capable of receiving one or more requests for data; said integrated circuit is also capable of determining if said one or more requests for data matches said selected data stored in cache memory.

25. The article of claim 22, wherein:

said integrated circuit is capable of creating a requester profile by associating said requester of data with said historical device access information.

26. The article of claim 22, wherein:

said integrated circuit is capable of updating said profile with additional device access information.

27. The article of claim 20, wherein:

said integrated circuit is capable of retrieving device data layout information from one or more said mass storage devices and storing said device data layout information in cache memory.

28. The article of claim 27, wherein:

5       said integrated circuit is capable of responding to a request for data by determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

29. A system, comprising:

10       a controller card including an integrated circuit, the controller card being capable of being coupled to a bus, the integrated circuit being capable of retrieving selected data from one or more mass storage devices external to said integrated circuit, based at least in part on historical device access information of at least one requester of data.

30. The system of claim 29, wherein:

15       said integrated circuit is further capable of storing said selected data into cache memory.

31. The system of claim 29, wherein:

      said requester of data comprises one or more workstations capable of exchanging commands and data with said integrated circuit.

20 32. The system of claim 29, wherein:

      each said workstation capable of generating at least one of a media access control (MAC) address, processor identification and user information.

33. The system of claim 29, wherein:

said one or more mass storage devices comprising a storage array.

34. The system of claim 30, wherein:

said integrated circuit is further capable of receiving one or more requests for data; said integrated circuit is also capable of determining if said one or more requests for data matches said selected data stored in cache memory.

35. The system of claim 29, wherein:

said integrated circuit is further capable of creating a requester profile by associating said requester of data with said historical device access information.

36. The system of claim 35, wherein:

said integrated circuit is further capable of updating said requester profile with additional device access information from one or more said requesters of data.

37. The system of claim 29, wherein:

said integrated circuit is further capable of retrieving device data layout information from one or more said mass storage devices and storing said device data layout information in cache memory.

38. The system of claim 37, wherein:

said integrated circuit is further capable of responding to a request for data by determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

39. A method, comprising:

retrieving, by an integrated circuit, device data layout information from one or more mass storage devices, and storing, by said integrated circuit, said device data layout information in cache memory.

40. The method of claim 39, wherein:

5       said integrated circuit is further capable of responding to a request for data by determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

41. The method of claim 39, wherein:

10       said device data layout comprises a file system type selected from a file allocation (FAT) file system and a new technology file system (NTFS) type.

42. An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

15       retrieving, by an integrated circuit, device data layout information from one or more mass storage devices, and storing, by said integrated circuit, said device data layout information in cache memory.

43. The article of claim 42, wherein:

20       said integrated circuit is further capable of responding to a request for data by determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

44. A system, comprising:

a controller card including an integrated circuit, the controller card being capable of being coupled to a bus, the integrated circuit being capable exchanging commands and data with one or more mass storage devices, said integrated circuit being further capable of retrieving device data layout information from one or more said mass storage devices,  
5 and storing said device data layout information in cache memory.

45. The system of claim 44, wherein:

said one or more mass storage devices comprising a storage array.

46. The system of claim 44, wherein:

said integrated circuit is further capable of responding to a request for data by  
10 determining the location of said data on said one or more mass storage devices by performing selected disk access operations on said data layout information in said cache memory.

47. The system of claim 44, wherein:

said device data layout comprises a file system type selected from a file allocation  
15 (FAT) file system and a new technology file system (NTFS) type.

48. An apparatus, comprising:

an integrated circuit capable of retrieving device data layout information from one or more mass storage devices, and storing, by said integrated circuit, said device data layout information in cache memory.

20 49. The apparatus of claim 48, wherein:

said integrated circuit is further capable of responding to a request for data by determining the location of said data on said one or more mass storage devices by



performing selected disk access operations on said data layout information in said cache memory.

50. The apparatus of claim 48, wherein:

said device data layout comprises a file system type selected from a file allocation

5 (FAT) file system and a new technology file system (NTFS) type.